

**CITY OF LOS ANGELES**  
INTERDEPARTMENTAL CORRESPONDENCE

Date: February 28, 2014

To: Miguel A. Santana  
City Administrative Officer

From: *Ted Allen*  
Digital signed by Ted Allen at 9:23 am, Feb 28, 2014  
for Deborah Weintraub, AIA, LEED<sub>AP</sub>  
Interim City Engineer

Subject: **SAVE OUR STREETS LOS ANGELES (SOSLA) PROGRAM**  
**COUNCIL FILE 13-1300-S1**

On August 13, 2013, the City Council instructed the Bureau of Engineering (BOE) to assist the City Administrative Officer (CAO) and Chief Legislative Analyst (CLA) in reporting on a number of items related to the SOSLA program. This report contains the BOE's updates to items a, b, p, u, v, w and x as requested in CF 13-1300-S1.

- a. *Estimate*** - *With the assistance of the Department of Public Works, Bureaus of Street Services (BSS) and Engineering (BOE), report with more detail on the funding requirement and potential funding options, to achieve an overall average Citywide street system pavement grade of B or better, with further breakdown and analysis by Select Streets vs. Residential Streets.*

BOE retained the services of the firm Harris and Associates (Harris) to assist with analyzing the program and developing a cost estimate. The resulting Harris estimate report dated February 27, 2014, is attached. This report provides a summary of the findings of the Harris estimate report along with additional BOE recommendations and analysis.

As requested, the estimate report includes the core street reconstruction work that would be required in order to improve streets with a condition assessment rating of "D" or "F". The scope of work does not include such items as storm drains, sidewalks, alleys or green/great/cool/complete street elements. BOE wants to make clear that the exclusion of those items from the report should not be interpreted as a lack of support for these work elements on the part of BOE, or the City. Instead, their exclusion is wholly based on fulfilling the specific analysis that was requested, which was to provide a cost estimate for the fundamental work required to improve streets with a "D" or "F" rating. However, BOE expects that the funding of a program that includes only the core street elements may likely help the City's other related street efforts by presenting opportunities for leveraging the program's street work to obtain grant or other funding for additional related work. BOE directed the parameters of the Harris report with an expectation that the work would be coordinated with other work elements from outside the program.

The cost analysis found that there are two primary unknowns that have the greatest impact on the cost. These unknowns are the percentage of street surface area that will require full reconstruction and the amount that costs will escalate annually during the program duration.

Full reconstruction is defined as the removal and replacement of the entire existing pavement structure (pavement and base material), which would be required in areas where the structural integrity of the street has been lost. This is different and more expensive than the pavement grinding and overlay that will be sufficient in other portions of the streets, where the surface asphalt has deteriorated but the underlying structure of the street is intact.

There is no direct way to determine the percentage of full reconstruction needed from the Pavement Condition Index (PCI). The Harris analysis estimated the likely range of full reconstruction work based on a visual analysis of a statistical sampling of streets. Harris defined the likely statistical quantity estimations for the percentage of full reconstruction in categories of "low", "mean" and "high", with a 95 percent confidence level that the actual quantity would be between the "low" and "high" estimations.

Use of the "high" reconstruction quantity estimate would provide a fairly strong assurance that all streets with a condition assessment of "D" or "F" could be improved within the estimated cost of the program, but it would also require the highest funding amount. Use of the "mean" quantity would provide an estimate with a lower but moderate assurance of improving all "D" and "F" streets within the estimated program cost. Use of the "low" reconstruction quantity estimate would provide the lowest assurance that all "D" and "F" streets could be improved within the program cost without additional funding but it would also require the lowest funding amount.

BOE did not request that Harris include a cost estimate for the "high" reconstruction quantity range. It was felt that the extra assurance to complete all "D" and "F" streets in the program would not outweigh the extra cost to the public to fund the highest likely reconstruction quantity. Therefore, it was requested that Harris calculate two estimates; one using the "mean" range of estimated reconstruction quantities and one using the "low" range. Any singular use of the word "estimate" in this report is meant to represent both of these estimates collectively.

Escalation of construction costs is the other most significant variable in the cost estimate. Normally, BOE would use an annual escalation rate in the range of 5 percent for shorter term projects. However, it was necessary to take a very close look at the rate used in this estimate because the size of the program coupled with the program duration means that small changes in the escalation rate would cause the program estimate to change by many millions of dollars. After much discussion and analysis it was decided to use a 3 percent annual escalation rate.

There is a very real possibility that the actual values of either of these two primary variables, as well as a number of lesser significant assumptions, could turn out greater than assumed. In that case, should the extra cost exceed available contingency, supplemental funding would likely be necessary in order to improve all “D” and “F” streets unless some other cost items turned out to be less than estimated. However, BOE recommends that assuming some risk of potential scope reduction or need for additional future funding is preferable to asking the public up front for the much greater program cost that would be required to completely eliminate such risk.

The scope of work included in the program estimate was strictly limited to costs of rehabilitating 8,200 lane miles of current “D” and “F” rated streets as well as an assumed 500 lane miles of streets that may fall into the “D” or “F” category over the life of the program. This includes necessary associated items such as striping, traffic loop replacement, access ramps and small quantities of curb and gutter. As previously mentioned, the scope of work for the estimate does not include such items as storm drains, sidewalks, alleys or green/great/cool/complete street elements. Should it be decided that any of these additional items are to be included in the SOSLA program, the cost estimate would need to be revised accordingly.

In preparing the cost estimate, construction durations of 10, 15 and 20 years were considered. As discussed in more detail in the Harris report, it was found that a 10-year schedule would be difficult to accomplish, would not provide much time for coordination with utilities and other entities and would likely have a high traffic impact. The largest concern that we had about the feasibility of a 10-year construction period was that it would require very high levels of construction completions, about 250 miles per year from the first year to the last year. We do not think it is likely that full production would be accomplished in the first year or two of construction. It would also be unlikely in the last few years, because in the latter years there will not be many candidate streets left and the chances that there would be sufficient streets without coordination holds would be much lower. If full production is not achieved in early and late years of a 10-year construction program, the peak years would need to accommodate close to 300 miles per year which would be very disruptive and difficult.

In comparison, a 15-year construction period would provide the following key benefits when compared with a 10-year construction duration:

- More Time for effective coordination with utilities and other projects
- Reduced traffic impacts
- Reduced rush-hour disruptions
- Improved Bicycle and Transit Plan Coordination
- Increased ability to leverage program work to obtain and incorporate grants for related work (green streets, great streets, etc.)
- Reduced likelihood of marketplace saturation leading to higher bid prices
- Ability to grow the program smoothly and incorporate lessons learned

BOE analyzed a sample distribution of construction work over a 15-year construction schedule that reflected a ramping up and down in the early and late years, as is contained in the Harris report, and found it to be much more feasible. BOE did not analyze the 20-year construction schedule in great detail because the 15-year construction duration appeared to be feasible and provide adequate time for coordination. A longer program which would cost more and take longer to complete was not preferred. Therefore, BOE recommends a 15-year construction duration for the program as used in the Harris report.

BOE also analyzed the time that would be required prior to starting the construction period. It is important to note that the first year of the 15-year construction duration would include the completion of the first batch of construction projects, not just the start. This means that the time period prior to the construction period must include all activities from the start of the program to actually awarding construction contracts.

BOE estimates that three (3) years would be needed to procure service contracts, establish significant staffing, apply prioritization criteria to establish initial project packages, design the initial projects in coordination with utilities and other entities, and award construction contracts.

Although three (3) years for pre-construction activities may seem lengthy at first, it is actually a very aggressive schedule when considering everything that must be accomplished prior to the first year of construction. For example, the contracting process to execute contracts for necessary program management and design services will take about half of that period. Subsequently, the projects would still need to be prioritized and packaged according to adopted criteria using a system that the program staff would need to develop accordingly. Finally, the projects would have to be designed, bid and awarded to contractors in coordination with an outreach program to communicate with the public.

These are just some of the key high-level activities; listing all of the detailed activities needed to support them would be far too lengthy for this report. In fact, under normal circumstances it would take more than three (3) years to complete these tasks. But, due to the magnitude of the program and the value of time due to cost escalation, BOE has assumed an accelerated schedule for all activities. In order to accomplish this, we would use a creative approach wherever possible such as using existing on-call consultant contracts to help with start-up activities and possibly the design of some of the early project packages or pilot projects that may occur during the three (3) year period leading up to the main construction schedule.

BOE also estimates that two (2) years would be needed for project and program closeout following the construction period. Therefore, the cost estimates assume a 20-year overall program duration.

Using the assumptions discussed in this section, the cost of the SOSLA program using the “mean” reconstruction quantity is estimated to be \$3.86 billion. The cost of the program using the “low” range of reconstruction quantities is estimated at a cost of \$3.54 billion.

It is recommended that the program cost be estimated at \$3.86 billion if it is desired to have a reasonable assurance that all “D” and “F” rated streets would be improved under the program. Alternatively, it is recommended that it be estimated at \$3.54 billion if it is desired to minimize the initial funding request with the understanding that there would be a higher likelihood that additional funding may later be required in order to improve all “D” and “F” rated streets.

Both of these estimates contain a 15 percent construction contingency, a 10 percent program contingency, and are inclusive of estimated project delivery costs by all City agencies.

The contingency rates applied are on the low end of what would typically be used for an estimate at the preliminary stages of a program considering the level of unknowns in the program. The Harris report contains a list of considerations for the program that identify many key items related to construction and program contingency. Construction contingency is set aside for potential costs related to construction work itself such as the unknown thickness of asphalt, the fact that hillside streets will likely be more expensive, etc. It also covers the cost of future construction change orders. The program contingency is to account for more global unknowns such as variations in cost escalation, potential effects on bid prices by adding so much work to the marketplace, variations in delivery costs from assumptions, etc.

As mentioned previously, critical early pre-construction activities will include the establishment of the program management and design teams. BOE recommends that these teams, as well as other staffing components, be a mixture of City and consultant staff. Hiring and training the number of City staff that would be required to deliver the program without consultant support would not likely be feasible without greatly extending the program duration. This would result in much greater costs due to the resulting escalation. On the other hand, it would also not be possible to run the program entirely with consultants without any City staff because there will be certain needs for services, such as contract procurement, payment processing, inspection and oversight, that must be performed, at least in part, by City staff. BOE strongly recommends that the core program management and Departmental coordination roles also be performed by City staff given their familiarity with City Policies and requirements.

BOE provided input to Harris on estimated staffing costs for the program based on our past project and program management experience. The delivery cost percentages used in the estimates reflect numbers that are generally lower than those of typical

projects. This reflects an expected economy of scale and relatively simple designs, from an engineering standpoint. But, in adjusting them downward, we did also consider that the coordination effort with the public, utilities and other City agencies will be significant. BOE estimates that the cost provided in the estimate for delivery of the program is reasonable and adequate. However, to fully analyze the exact staffing needs of the program and create an actual organization chart of necessary specific positions in various City Departments, and to further estimate what will be performed with consultant support, is a significant subsequent task that will require a great deal of effort.

BOE recommends that consideration be given to authorizing some positions now to begin the program planning and pre-design effort. It is worth noting that at the start of the program the estimated dollar value of cost escalation would exceed \$5 million per month. This means that salary costs invested now -- to try to shave time from the schedule -- would pay great dividends if the program moves forward. The following positions are recommended for consideration to start key activities now, such as the procurement process for service contracts and early program planning. They are at a level that they could be absorbed by vacancies in BOE should the program not move forward.

BOE Immediate Staffing Recommendations for an Early Start

- 1 Senior Civil Engineer
- 1 Civil Engineer
- 2 Civil Engineering Associate III's
- 1 GIS Specialist
- 1 Senior Management Analyst
- 1 Management Analyst II
- \$500,000 for consultant services (using existing on-call contracts)

As is typical for all BOE service contracts, service contracts initiated for the program during the early start would have the stipulation that no work would be guaranteed and would not put the City under any obligations should the program not move forward. These contracts would also be useful for regular BOE street projects even if SOSLA does not move forward.

Funding of some positions in key other Departments, such as your Department, the Bureau of Contract Administration (BCA), the Bureau of Street Services (BSS) and the Department of Transportation (LADOT), would also be helpful in starting early program work. BOE recommends that these Departments be contacted for their early-start staffing recommendations.

Aside from starting the contract procurement process, one of the key tasks that this early-start group would perform would be to develop a full proposed organization chart

for the program, along with a plan for the division of work between City staff and consultants. Until that is complete, it is hard to estimate exactly what staff might be required for each City Department should the program start in November of 2014. At a minimum, BOE estimates that it would require all of the positions identified for the early-start group, along with the addition of some higher level program management staff and additional staff to manage contracts and payments.

Considering that this program would be about the size of all of BOE's capital programs combined, BOE recommends that an additional Deputy City Engineer position be added to oversee the program, as well as a Program Manager III. Beyond that, the recommended BOE staffing will largely depend on the breakdown of responsibilities between consultants and City staff, but there will likely be a variety of BOE positions needed to perform program management, project management, design oversight, contract management, GIS, Survey, and various support and coordination related positions. Positions will also be required in various other Departments to perform additional necessary functions and interact with the Program team.

The Harris report contains a sample graphical look at how the annual expenditures for construction and delivery costs might be allocated by year. BOE finds the allocation reasonable and recommends that those annual delivery costs be used for planning purposes until the early-start group can report back with a more detailed delivery and staffing plan. Should the early-start group not be approved, BOE recommends that the delivery costs in the Harris report be used for planning purposes until such time that the program is approved and has the time to develop a detailed staffing plan. It should be noted that the Harris report cost allocation assumes a November 2014 start. This means that each year of the cost allocation starts in November and the numbers would have to be adjusted to align with a fiscal year funding schedule.

There has been much mention in this document of the estimated 20-year program schedule (15-year construction schedule). It is always the goal of BOE to deliver any program in less time than scheduled, and that would certainly be the goal with this program as well. But, there is always a chance that a program can run behind schedule and, even in the case that the vast majority of the program is completed within schedule there could be certain streets in the latter years that may need to be delayed beyond the core construction period for optimum coordination with grants, utility work, etc. Therefore, BOE recommends that funding eligibility be flexible to the extent possible to allow for construction work to be eligible beyond the estimated core construction period.

- b. *Prioritize Which Streets/When*** - *With assistance from BOE and BSS, provide a preliminary work plan that identifies D and F grade streets that would be bond-eligible, and include a preliminary construction schedule.*

Although there is a current database of D and F rated streets, BOE recommends not limiting funding eligibility to only those streets that are known at this time. It is recommended that the funding language be flexible enough to allow the addition of future streets found to be rated D or F and to allow the removal of streets that, upon further study, may be found to actually be rated C or better.

BOE recommends that an Internet-based Geographic Information System be developed in the early years of the program to apply objective criteria to candidate street segments for use in prioritizing and packaging them into projects.

It is anticipated that the program would have an Administrative Oversight Committee (AOC) similar to most other large capital programs. We recommend that the City Council be requested to adopt the prioritization criteria to be used for the program, at least in general terms, and that they delegate authority as necessary to the AOC to implement further details in the process and to approve annual project packages.

Examples of objective criteria that could be used to prioritize and package projects include:

- The Pavement Condition Index (PCI) score
- Street type
- Traffic density
- Street or drainage complaints
- Readiness for construction
- Clearance of conflict with utilities and other programs
- Transit Use
- Bike Plan route type
- Proximity to other candidate streets in order to facilitate construction
- Proximity to police and fire stations, hospitals and schools

In preparing annual project packages, it is recommended that street segments be grouped into projects by geographic location so that the segments in an individual project would be in close proximity to one another to help facilitate construction. It is also recommended that the projects as a whole be distributed throughout the City to minimize the impact to individual areas and provide all areas of the City with some benefit each year.

**p. *Vacate Streets and Alleys*** - *With assistance from LADOT and BOE, report on potential locations where underused streets or alleys may be vacated to reduce ongoing maintenance requirements.*

It is not often feasible to vacate underused streets, as lots are required to have access to a public street under the City's Zoning Code and Building Code. The City must consider the impacts on adjacent private properties before initiating a street vacation.

Street vacations are typically initiated by adjacent property owners, who pay a fee for the City to process a street vacation. In specific situations, the City may initiate the vacation process, taking on the role of the applicant, for example in conjunction with capital projects such as fire stations, police stations, port development and Recreation and Parks projects. Most of the applications are submitted by developers in conjunction with development projects. However, we also have vacation applications submitted by public agencies, port facilities as well as other public agencies such as Caltrans and LAUSD.

Property owners in certain parts of the City, such as the Wilmington Industrial area in Council District 15, have shown an interest over the years in vacating City streets and alleys. Otherwise, it is a time consuming process to identify potential locations for Street vacations.

In recent years, the City has approved temporary closures of streets and alleys to mitigate criminal activity. In addition, the City, many years ago by ordinance withdrew many streets from public use. Property owners adjoining these streets and alleys may be interested in vacating these streets and alleys. However, since these streets and alleys are not being maintained at this time, vacating these streets would not alleviate the City's current maintenance schedule. In addition, most of these streets likely would still be required to maintain the legal status of the adjoining lots.

On average, the City receives approximately 25 street and alley vacation applications per year. Any "D" or "F" rated streets vacated in the future would of course be removed from the SOSLA program upon vacation.

No work related to alleys is included in the estimates provided.

***u. Pre-Qualified List of Contractors - Assist BOE to develop a Request for Qualification to establish a list of qualified contractors eligible to perform work associated with SOSLA program.***

The BOE is very supportive of creating a Pre-Qualified list of contractors to be used for this program. In fact, unlike the service contracts for Program Management and Design services that would be on the critical path of the program schedule, BOE has been working on establishing a Pre-Qualified list of street contractors independent of SOSLA and expects to release a Request for Qualifications in the near future. The list would enable BOE to award construction contracts more quickly and efficiently. It would expedite the contracting process by completing some of the most time-consuming contracting steps ahead of time, reducing the need to perform these steps for each individual project. All qualified contractors would be placed on the list to maximize competitiveness and capacity. The list would not be limited to a certain number of contractors.

Pre-qualification is expected to improve the attractiveness of City projects and facilitate competitive responses from the contracting community. By addressing significant bid requirements in advance, the time and cost for the contractor to prepare a bid for each project is significantly reduced, thereby encouraging more contractors to submit bids. During the length of the program, the list would have periodic open periods to allow additional contractors to apply to be added to the list.

Rules establishing the Pre-Qualified list would make clear that the City would be under no obligation to use the list for any project and that the option to use regular bid and award procedures will be preserved.

If Federal or State funds are added to the program, those would likely have to be used for designated projects that would bid using normal bid and award procedures compliant with the necessary contracting requirements.

- v. GIS Cloud Software** - *With assistance from BOE, BSS, and BCA, report with recommendations for procuring a new, cloud-based, public right-of-way activity coordination software system. (Council File No. 13-0612)*

BOE recommends that our existing Public Way Reservation System (PWRS) be augmented for this program and to support ongoing functions, with approximately \$200,000 of consulting work. Our recommendations are included in the separate report prepared by the ITA Department, (ITA report dated October 23, 2013).

- w. Bond Delivery Track Record of Success** - *With the assistance of BOE, report on the City's track record of delivering General Obligation Bond projects on-time and under-budget.*

The BOE has been responsible for the oversight and delivery of several voter approved programs in recent years:

- 1) Animal Facilities Program (Prop F)
- 2) Fire Facilities Program (Prop F)
- 3) Clean Water Bond Program (Prop O)
- 4) Public Safety Bond (Prop Q)
- 5) Seismic Bond (Prop G)
- 6) LA for Kids Program (Prop K)
- 7) Zoo Facilities Program (Prop CC)

BOE is proud of its track record in delivering these programs. An outline of the successful delivery of these programs is provided as follows:

Animal Facilities Program (Prop F)

- Voter approved \$154.1 million Bond.
- Original proposed scope of work was to construct:
  - 8 Animal shelter facilities
  - 4 Replacement shelters
  - 2 Renovations of existing shelters
  - 1 New shelter
  - 1 Annex
- All aforementioned projects were completed. \$15.9 million from project savings and interest earnings were allocated for additional renovations to existing animal shelters.

Fire Facilities Program (Prop F)

- Voter approved \$387.5 million Bond.
- Original proposed scope of work was to construct a total of twenty (20) fire facilities consisting of:
  - 1 Air Operations Facility
  - 1 Satellite Fire Station
  - 8 Standard Fire Stations
  - 9 Regional Fire Stations
  - 1 Training Facility
- All aforementioned projects were completed. \$60.7 million from project savings and interest earnings were allocated for the construction/renovation of five (5) additional facilities;
  - Fire Station 7 - \$24.4 million
  - Fire Station 39 - \$33.3 million
  - Renovation of three existing Fire Station Facilities - \$3 million

#### Clean Water Bond Program (Prop O)

- Voter approved \$500 million Bond, \$260 million has been expended to date.
- For projects to protect public health by cleaning up pollution, including bacteria and trash, in the City's watercourses, beaches and the ocean, in order to meet Federal Clean Water Act requirements.
- The program currently includes 38 projects.
  - 19 projects have been completed.
  - 19 projects are in various stages of implementation.
- The program recently realized \$62.2 million in additional funding for projects. A substantial portion of this additional funding was generated from individual project savings.
- Four projects have won a total of 13 awards to date from various professional organizations including the Echo Park Lake Rehabilitation Project and the South Los Angeles Wetlands Park Project.
- The South Los Angeles Wetlands Park Project was the first City project to receive an Envision certification (similar to LEED™ but for civil projects), receiving the 2<sup>nd</sup> Platinum rating to be awarded in the nation.

#### Public Safety Bond (Prop Q)

- Voter approved \$600 million Bond.
- Original proposed scope of work was to construct a total of eleven (11) police facilities consisting of:
  - 2 Bomb Squad facilities
  - 1 EOC/POC/Fire Dispatch
  - 6 new Area Police Stations
  - 1 Valley Traffic Division
  - 1 Metro Detention Center
  - 12 Police Station Renovations
- All aforementioned projects were completed. \$88.1 million in project savings and interest earnings were allocated for the construction of five additional facilities:
  - EOC/HVAC Retrofit - \$3.6 million
  - Police Academy Renovation - \$22.7 million
  - New Training Facility at the Police Academy - \$18.4 million
  - New Northeast Area Police Station (administration building) - \$27.2 million
  - New Metro Division - \$19.1 million

### Seismic Bond (Prop G)

- \$79 million allocated from voter approved Prop G Seismic Bond.
- The current Bridge Program is \$833 million, which includes the \$79 million Seismic Bond funding. The bond funding is leveraged against Federal Highway Bridge Program (HBP) grant dollars at a ratio generally in the range of about seven Federal/State dollars for each local dollar.
- There are a total of 60 projects in the bridge program, of which 31 have been completed.
- Active projects include the replacement of the 6th Street Viaduct, the Glendale Hyperion Bridge Complex and bridges over the Los Angeles River at Colfax Avenue, First Street, Main Street, Riverside Drive, and Spring Street.

### LA for Kids Program (Prop K)

- LA for Kids Program (Prop K) is a voter approved citywide assessment district which provides \$25 million each year for 30 years.
- It is for the acquisition, improvement, construction, and maintenance of City parks, recreation facilities, and other projects.
- Consists of Two Components
  - Specified City Projects
  - Competitive Grant Funding for other public agencies and non-profit organizations
- Ordinance No. 175654, (January 3, 2004), designated responsibility to the City Engineer for administering the open and competitive grant process.
- Now in Year 17, completed To date:
  - 140 of the 187 specified projects
  - 105 competitive grant projects
  - Major recent accomplishments include
    - Sepulveda Basin Sports Center
    - Rosecrans Recreation Center improvements  
(a joint project between Prop K and Prop O)

### Zoo Facilities Program (Prop CC)

- Voter approved \$47.6 million Bond.
- The bond is one of multiple funding sources for the \$172.6 million Capital Improvement Program authorized by the 1992 Los Angeles Zoo Master Plan.
- To date, BOE has delivered;
  - 6 Animal Exhibits
  - An Animal Health Center
  - The Children's Zoo
  - The Children's Discovery Center
  - A Front Entry Plaza, two major artwork installations and numerous utility system improvements.
- The Program is nearing completion, with two (2) active projects remaining (Rainforest of Americas and the new Jaguar Exhibit).

- x. **Job Creation** - Report on the projected overall economic impact of SOSLA including, but not limited to the following: private sector job creation; increased tax revenue; potential to decrease claims filed with the City for personal injury and damage to vehicles and other property; and potential reduced maintenance costs to City vehicle fleet.

Job creation is difficult to estimate as there are often cascading impacts which are not easy to account for. Caltrans has stated that they use an industry accepted formula estimating 18,000 jobs created per \$1 billion spent on construction. Using their formula, the program would create about 43,000 to 47,000 jobs. The Caltrans formula takes into account lower tier and indirect costs. BOE in the past has used a formula developed internally that is more conservative and aims to measure direct construction jobs only in annual full-time equivalents. That formula estimates direct construction jobs at about 13,000 to 15,000 annual full-time equivalent jobs.

BOE does not have estimates of potential claims reductions or reduced maintenance costs for vehicles.

Please contact Mati Laan at (818) 374-5086 for additional information.

DW/TA/ML

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Attachment: Harris SOSLA Estimate Report Dated February 27, 2014